

Было отмечено, что критический тепловой поток возникает при перегреве поверхности более чем на 35, 42 и 52 °С для температур жидкости на входе, равной 68, 58 и 48 °С, соответственно. Основным механизмом, приводящим к возникновению КТП, является возникновение нестабильностям, приводящим к подогреву жидкости на входе в канал и периодической блокировкой распределительного коллектора.

Влияние смачиваемости поверхности теплообмена на характер кипения было исследовано для размеров микроканалов в диапазоне от 0,25 до 1,0 мм. В результате экспериментов было установлено, что повышение смачиваемости поверхности улучшает теплообменные характеристики микроканальных поверхностей.

Проведенные эксперименты позволяют утверждать, что интенсификация процесса кипения на микроканальной поверхности определяется не отдельными геометрическими размерами микроканалов, а соотношением их высоты и ширины, что физически объясняется совместным влиянием этих геометрических характеристик на поведение парового пузырька.

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LEGAL PROTECTION OF INTELLECTUAL PROPERTY OBJECTS IN LESYA UKRAINKA EASTERN EUROPEAN NATIONAL UNIVERSITY

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This article analyzes the experience of legal protection of intellectual property objects in the world, in Ukraine and in Lesya Ukrainka Eastern European National University, as well as defined statistics and takes into consideration the relationship between innovation processes, transfer of technologies in the field of science and education, the necessity to protect developments related to intellectual property objects with legal means.

It is well known that in many economically developed countries scientific developments are generated first of all in the scientific sector of higher education institutions (specialized scientific institutions (research institutes) are assigned a secondary position). In post-socialist countries research institutes have almost exhausted their innovative ideas because they were built on the basis of regulatory



decisions of the administrative command system, and failed to restructure themselves up till nowadays into academic institutions, operating in the market economy conditions .

Science university sector is more flexible because it is built largely on the work of temporary creative collectives (groups), and taking into account the highly qualified scientific personnel and creative students, this sector of science is capable of solving challenging technological and economical tasks.

Recognizing that the most promising area of innovation is the development of transfer of technology, our country has chosen such path of economic development.

Countries that effectively use intellectual achievements, human and scientific resources, natural resources have reached high quality of human life, a new system of domestic economical resources, political international relations in the process of their economic development. These countries include the U.S., Japan, Western Europe countries with the growth of gross domestic product from the production of high-tech products amounting to 70...90 %. In such countries international transfer of technology has long been one of the most lucrative export items.

Considering these processes, the system of information transfer with the use of electronic environment has created new opportunities for the industry, science and education. In particular, in terms of education it has enabled the introduction of modern forms into the learning process (distance learning courses, e-books, on-line testing tools) after Ukraine's accession to the Bologna Process.[3 p.185.]

There is no doubt the fact that the transition of the economy to an innovative way of development is not possible without the active implementation of innovative policy as entrepreneurial ability of the staff becomes one of important resources that assist in increasing the competitiveness of socio-economical systems of any level.

It should be noted that along with experts capable to innovate, increasing their professionalism with the constant update of knowledge within the system of continuous education, one must also focus on the formation of the general culture of innovation of specialists who have been employed for a long time and trace back their education to the Soviet times. Such orientation encourages the society to overcome negative trends prevailing since the times of the USSR.

One of these negative trends is the creation of labor market structural imbalance as a result of which job seekers often do not have sufficient competence, as required by modern employers. This contradiction is exacerbated with Ukraine's accession to the World Trade Organization.

Ukraine's accession to the World Trade Organization — is not only the liberalization of trade, but also the increase of foreign investments, emergence of modern high-tech enterprises with appropriate staffing. Therewith, the parallel process may be entitled as the flow of skilled domestic workers from stable enterprises to new quite profitable foreign companies. This situation can promote innovation elite outflow from domestic enterprises. Even now, recognizing the importance of the human resources, foreign high-tech companies, large multinational corporations (MNCs), tend to the areas that are so-called — «donors» of professional scientific and technical staff, situated close to research institutions and design bureaus and technical universities while looking for the location of their regional branches and offices.

In this regard, innovative education, training of managers and creative technical staff can not be regarded as a separate task. Our country requires a systematic approach to the creation of conditions and activities aimed at strengthening positions of experts on the national labor market.

Experience of the Russian Federation in dealing with staff problems extends to the creation of mechanisms of cooperation in the public-private partnership an example of which is the successful cooperation of the Russian Academy of Sciences and OJSC «Norilsk Nickel», which makes an annual contribution of about \$ 40 million to the research developments in the field of hydrogen energy.

Research educational complexes on the basis of research institutes and universities that engage business through the establishment of appropriate infrastructures are currently gaining experience in Russia. Staff training is thus directly «tied» to the needs of science and industry.

It is well known that in the current economy the main role is attributed to value created by knowledge while the intellectual property (IP) is turned into a commodity in line with the experts' estimate the IP as a constituent of the world trade amounts to about 1 percent. Commercialization of the Intellectual Property in market conditions calls for considering it both as a commodity and capital. In particular, as the product the IP may be deemed an intangible asset that is used in the economic activity and can be reproduced and distributed rather quickly and without significant costs.



In the world IP- is the significant capital. For example, in the U.S. income from licensing rights on intellectual property objects have increased from \$ 14 billion to \$ 100 billion. At the end of the last millennium and in the beginning of this millennium most foreign patent offices have seen a surge of activity in submitting patent applications. In particular, in the period of 1992...2002, the number of applications filed in Europe, Japan, the United States has increased by more than 40 per cent. Firms and state research institutions are increasingly using patents as a tool to protect their inventions. These positive trends are explained not only by rising costs of scientific research and development work, but also by changes in the competition that plays a key role in the growth of inventive activity

As an indicator that assesses the scientific activity, the institution activity may be used as the indicator of patent activity. The best indicators of patent activity are the number of patent applications for inventions and for utility models and received security documents (patents). In recent years, patenting in Ukraine has increased. Enterprises and organizations of the Ministry of Education and Science are most active in terms of submitting applications, they submitted 944 applications for patenting inventions and models in the first quarter of 2013, which constitutes 45 percent of the total number of applications. According to the State Intellectual Property Service of Ukraine rate of activity in submitting applications on intellectual property objects has remained stable, and over the past four years there has been a steady increase in the number of obtained protection documents for inventions. Top patenting rate by sector is evident in the higher education sector, and such sectors of science –as nature science. Analysis of the distribution of the total number of applications for inventions and utility models in regions shows that over 76 % of the total number is represented by enterprises and organizations which are located in the industrialized regions (Kyiv, Kharkiv, Dnipropetrovsk, Donetsk, Lviv, Vinnytsia, Odessa area) [5, p. 78].

Patent statistics is the main indicator of innovation capacity and one of the key indicators of technological development of countries and regions. Ukraine shows relatively high patent activity, so according to the (World Intellectual Property Organization) Ukraine ranked the 23rd place in the ranking of 103 countries assessed in terms of the number of patents in 2011.

Nearly two decades of experience in the field of university protection of intellectual property objects indicate the growth of patent activity as well in our university in the recent years. For example, in 1996...1997. only 5...6 applications per year were submitted with subsequent receipt of a corresponding patent, while in the last three years, an average of 20 applications per year have been submitted this year, 17 applications submitted as of the moment. During the implementation of the work on the legal protection of IP the University has received 72 patents for inventions and utility models. The highest patent activity in our university is well apparent on faculties the natural profile namely departments involved into developments in the field of chemical technology and single crystals.

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